

PATENT SPECIFICATION

DRAWINGS ATTACHED

L.169,688



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COMPLETE SPECIFICATION

Pipe Clamp

We, GESELLSCHAFT FÜR TECHNISCHE FORTSCHRITT M.B.H., a German Company, of Bergstrasse 66A, 541 Höhr Grenzhäusen, Germany, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and the following statement:—

THE INVENTION relates to noise-insulated pipe clamps.

For resiliently fixing pipelines, it is known to insert simple smooth or profiled rubber strips between the pipes to be fixed and the clamps enclosing them, which clamps are fixed to structural members. This has the disadvantage that in the installation of a pipeline system, and in service, the inserted strips shift, whereby a metallic contact, i.e. a sound-transmitting bridge, results.

It has therefore already been proposed to form the pipe clamp in such a way that a rubber strip is vulcanized to a flat iron bar to form a pre-fabricated unit. Such pipe clamps can be fitted to any desired pipe-diameter on site, being there provided with suitable holes for the fixing means. But here also it has proved disadvantageous in that metallic contact between the iron flat and the pipe clamp occurs. From a manufacturing point of view, the expenditure on tool forms has turned out to be relatively large and no cost reduction is possible.

Moreover, hammering of pipe clamps having rubber vulcanized on and wall anchor pins has proved to cause the pipe clamps to buckle or spring, which hinders installation.

The present invention provides a noise-insulated pipe clamp having a lining consisting of self-damping material for surrounding a pipe clamped thereby, the lining comprising at least one flat strip which is provided on one side only with longitudinal or

transverse ribs or projections, the side without ribs being arranged in slip-proof manner on the inner surface of the pipe clamp.

The slip-proof arrangement of the strip may be achieved by friction between the lining strip and the clamp on clamping. However, we prefer to provide that the ribless side of the strip has, at fixed distances apart, conical or frusto-conical upright studs with the apex projecting outwardly, which studs are pushed through corresponding holes of the pipe clamp. It is particularly advantageous to provide the studs with a shank of lesser diameter than the largest diameter of the studs whereby a push fit connection is obtained with the holes.

The strip may have one half formed with the middle half may be provided with studs, while the quarter-length ends of the strip are studless. An arrangement with two strips and two studs in each half of a clamp is also possible.

The invention will now be further described with reference to the accompanying drawings, in which:

Figure 1 shows a lining strip in side elevation;

Figure 2 shows the lining strip in end elevation;

Figure 3 shows a pipe clamp with the lining strip during fitting;

Figure 4 shows a further form of strip during fitting; and

Figure 5 shows a lining strip consisting of two parts in a pipe clamp.

Figures 1 and 2 show a clamp lining strip having on one side ribs spaced apart as equally as possible, the ribs having a height which corresponds to or slightly exceeds the average thickness (measured in the longitudinal direction of the strip) of a rib. The

strip accordingly has a rack-like conformation.

On the other side, which is ribless, are projecting conical or tapered studs 3, spaced as equally as possible, which are joined integrally with the strip-shaped part 1 by means of a shank 4, which has a smaller diameter than the widest part of the stud.

Figure 3 shows a pipe clamp with the lining strip 1, one end of which is inserted into the half clamp 5 in such a way that half of the strip lines this half clamp, the studs 3 being pushed through holes 7 in the half clamp. The pipe 8 to be clamped is enclosed by the other half 12 of the strip 1 and the other half clamp 6 is fitted and secured by the usual screw connection 9, 10 which is represented diagrammatically in the left half of Figure 3 only. In the usual way also, a wall anchor 11 is fitted to one of the half clamps. Obviously any other kind of fixing to the wall can be used.

The embodiment according to Figure 4 shows a lining strip in which the two ends 13 are made without studs and which is placed symmetrically in the half clamp 5, which has a so-called single-stud connection as in the embodiment according to Figure 3. The ends 13 are wrapped over the pipe and retained by the upper clamp half 6.

Figure 5 shows a pipe clamp with two lining strips one in each half of the clamp, holes 7 being arranged in each half of the clamp symmetrically about the centre line of the clamp.

For the insertion of a fitting aid, a central bore 14 can be provided in the stud 3 as shown in Figure 3.

WHAT WE CLAIM IS:—

1. A noise-insulated pipe clamp having a lining consisting of self-damping material for surrounding a pipe clamped thereby, the lining comprising at least one flat strip

which is provided on one side only with longitudinal or transverse ribs or projections, the side without ribs being arranged in slip-proof manner on the inner surface of the pipe clamp.

2. A pipe clamp according to claim 1, in which the ribless side of the strip has upright, conical studs, with the apex projecting outwardly, which are pushed through corresponding holes of the pipe clamp.

3. A pipe clamp according to claim 2, in which each stud is connected with the strip by means of a shank of smaller diameter, which shank corresponds in height and diameter to the thickness of the clamp and diameter of the hole.

4. A pipe clamp according to claim 2 or 3, in which one half of the strip is formed with, and the other half without, studs.

5. A pipe clamp according to claim 2 or 3, in which only a centrally disposed half of the strip is provided with studs and the two ends of the strip are stud-free.

6. A pipe clamp according to claim 2 or 3, comprising two half clamps and two strips each with two studs, each strip being suitable for covering one half clamp.

7. A pipe clamp according to any one of claims 2 to 6, wherein each stud has an axial central bore for the insertion of a fitting aid.

8. A pipe clamp according to any of claims 1 to 7 in which the or each strip has transverse ribs whose height is substantially equal to or slightly greater than their thickness.

9. A pipe clamp substantially as herein described and shown in Figures 1 and 2 together with Figure 3, Figure 4, or Figure 5 of the accompanying drawings.

MARKS & CLERK,
Chartered Patent Agents,
Agents for the Applicant(s).

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COMPLETE SPECIFICATION

2 SHEETS

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the Original on a reduced scale
Sheet 1.

Fig. 1

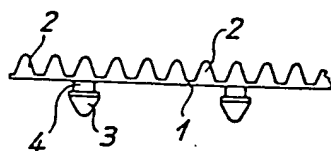


Fig. 2

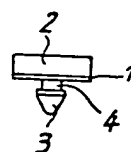
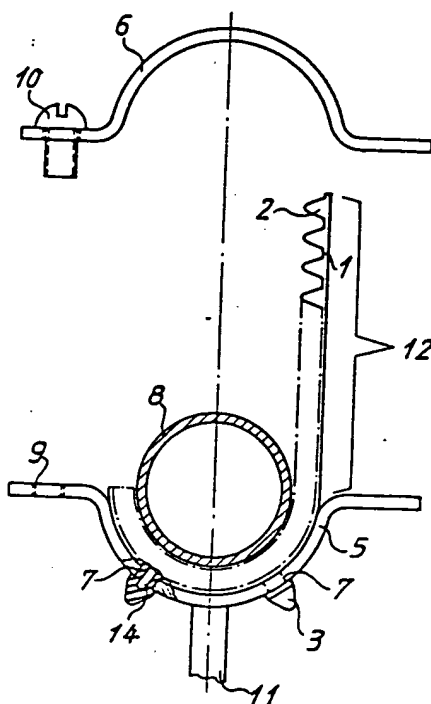


Fig. 3



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Sheet 2

Fig. 4

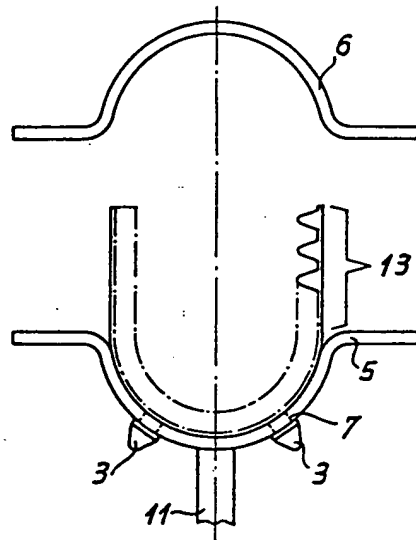


Fig. 5

